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IN THIS ISSUE

	PAGE
1949 World Food Situation	27
Canada's Agricultural Outlook	32
1950 Census of World Agriculture	34
Land Reform Progress in Japan	38
An Experiment in Low-Cost Food Production	42
Latakia Tobacco	44
International Agricultural News	46

FRONT COVER

A Market Scene in Germany

For the first time since the end of the war, European city markets are well supplied with farm products. (Photo by courtesy of Nathan Koenig.)

BACK COVER

World Map—International Trade in Grains and Soybeans, 1947–48

More than 80 percent of the grains and soybeans moving in international trade in 1947–48 came from the Western Hemisphere. United States shipments accounted for more than 60 percent of this volume.

NEWS NOTES

Mr. Hepler Visited Nicaragua

John V. Hepler, Head, Extension and Training Division, Technical Collaboration Branch, OFAR, spent part of November and December in Nicaragua. He visited the cooperative station at El Recreo, which is in eastern Nicaragua. Working through the United States Embassy, he also conferred with Nicaraguan Government officials on the technical collaboration program. Considerable interest was indicated in an extension of this program to western areas of the country.

International Wheat Conference Meeting in Washington

A number of wheat producing and consuming nations are meeting in Washington to undertake renegotiating an International Wheat Agreement. Sixty-two countries were invited to attend the sessions, which began January 25.

Mr. Akers Back From Fats and Oils Survey

Howard A. Akers, PMA Marketing Specialist, returned to Washington late in 1948 from a 3½-month trip through much of Europe and most of Africa. He made a survey, under the provisions of the Research and Marketing Act, of the market outlook for United States fats and oils.

TCB Official Returns From South America

Dr. Ross E. Moore, Chief, Technical Collaboration Branch, OFAR, has just returned from an 8-week trip to Brazil and Colombia. In Brazil, he represented the United States Department of Agriculture as an adviser at the Conference of Economic Counselors in Rio de Janeiro and visited agricultural stations in several states. In Colombia, Dr. Moore conferred with United States Embassy officials and agricultural experts and with Colombian Government officials regarding the work of the Agricultural Mission to Colombia and the program for exchange of students and professors. He also visited several agricultural institutions.

Our indebtedness for illustrative material is gratefully acknowledged as follows: p. 27, Dr. Montell Ogden; p. 31, W. J. Morse; p. 41, Kenneth Olson; p. 45, Dr. Afif I. Tannous.

FOREIGN AGRICULTURE ALICE I. FRAY, EDITOR

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1949 World Food Situation*

Most of the world's dinner tables, at the present time, are better supplied with food than at any other comparable period since the war.

Europe's food production is showing marked recovery. North America and Australia are continuing to have unusually large crops. Some countries, particularly in Europe, have been able to remove controls from some essential foods and to liberalize the rationing of others. The level of consumption in deficit-food-producing areas, however, is still somewhat below prewar, and the quality of the diet is also lower.

The increase in food production has not made the world food situation entirely satisfactory. The world's population has increased by an estimated 10 percent since before the war so that today's food production—although approaching prewar levels—must be divided among more persons. Also, the world is living on more or less of a hand-to-mouth basis, and most areas need to stock pile larger reserve supplies of food and feed. Furthermore, as has been pointed out by the Food and Agriculture Organization of the United Nations, even restoration of per capita food consumption to prewar levels will not be sufficient—for malnutrition was prevalent throughout the world even during the better harvest years before the war.

Unusually favorable weather in nearly all important food-producing countries was an important factor in the large food and feed crops harvested in 1948. Production of major food products during the year was about 6 percent above 1947, and about equal to the prewar average in terms of calories and without allowing for changes in extraction rates or for other

*This article is a condensation of a special report, *World Food Situation, 1949*, issued by the Office of Foreign Agricultural Relations. Copies of the report are available from OFAR.

Western Europe: 1948 sugar-beet harvests were good. The world has recovered from wartime sugar shortages.

efforts to utilize the food supply more efficiently. Many countries are using a larger proportion of the potato crop as food and are using higher extraction rates for cereals. Also, larger quantities of coarse grains are being used in flour or as foods in other forms, and there has been a marked increase in the production of foods for which world estimates are not available, such as sweetpotatoes, cassava, and plantains. Taking all factors into account, however, the per capita world food supply is still somewhat below prewar.

TABLE 1.—*World production of selected food products, 1935–39 average and annually 1945–48*

Commodity	1935–39 average	1945	1946	1947	1948
Food products:	*Millions*	*Millions*	*Millions*	*Millions*	*Millions*
Rice.....bushels	7,458	6,459	7,065	7,102	7,318
Wheat.....do	6,010	5,120	5,785	5,815	6,285
Rye.....do	1,730	1,363	1,451	1,490	1,625
Sugar, raw, short tons	34.7	26.3	31.3	33.9	37.7
Edible vegetable oils, do	8.3	7.5	8.0	9.1	9.1
Animal fats.....do	8.1	7.0	6.8	7.3	7.4
Marine oils.....do	.9	.2	.3	.5	.5
Potatoes.....bushels	8,418	6,473	7,132	7,468	8,852
Deciduous fruits [1], short tons	22.0	16.8	21.5	22.2	19.3
Citrus fruits.....boxes	266	338	343	359	.....
Meat [2].....pounds	66,300	60,800	61,900	65,900	.....
Milk [2].....do	374,600	322,700	325,000	327,900	.....
Feed crops:					
Corn.....bushels	4,751	4,965	5,277	4,826	5,920
Oats.....do	4,364	3,920	3,960	3,722	4,335
Barley.....do	2,363	1,910	2,085	2,185	2,425
Total percentage of 1935–39 [3]	100	84	92	94	100

[1] Includes apples, pears, peaches, apricots, cherries, plums, and prunes.
[2] In specified countries, including most countries of Europe, North America, Argentina, Brazil, Australia, and New Zealand.
[3] Weighted by calories with no allowance made for changes in extraction rates or other efforts to utilize these products more efficiently as food.

The world's future food supply will be influenced by several important factors. Continuation of favorable weather, of course, is vital to good production. The degree of recovery of production in war-torn and politically unstable countries will be of further consequence. There is great need for building up stocks of food and feed for nations to fall back on in years of poor harvest. Also important is the trade aspect—food-importing nations have need to build up their export trade in order to finance larger purchases of food from surplus-producing countries, which in a few instances are reducing production because they lack adequate export outlets.

At this date, the world's prospects for winter crops for harvest in 1949 appear for the greater part to be favorable. Except for deficit snowfall in some parts of the USSR, as well as some local moisture deficiencies elsewhere, Northern Hemisphere conditions—though probably not as good as a year ago—are now generally favorable for fall-sown crops. Acreage increases are expected in Europe and in the USSR. Another large winter wheat crop is in prospect in the United States. Some of the lands in India and Pakistan that could not be planted last summer because of floods are reported to be planted to winter crops, and above-average acreages are expected. Many countries have reported, also, that favorable conditions in the fall enabled their farmers to prepare an unusually large proportion of land for spring crops.

Europe's total food production for the last half of 1948 and the first half of 1949 is expected to be 15 to 20 percent larger than during the preceding 12 months, and within 3 percent of prewar. The sharp increase in grain output has permitted an improvement in the quality as well as the quantity of bread supplies, but flour-extraction rates are still above the prewar level and in a few areas the admixture of coarse grains remains heavy. Supplies of meats and fats continue much below prewar.

Far Eastern countries have made much less progress in expanding food production, and total supplies are only a little larger than they were a year ago. Furthermore, the food situation has been complicated by inflation and by political and military conflicts, making it hard both to get good domestic distribution of food and to bring in grains from surplus-producing areas. The Far East continues to have a large deficit in its own production of food. Although it is increasing its exportable supplies of rice, vegetable oil products, and sugar, which comprised its principal prewar exports, these are still less than half the prewar volume. Adding to the unbalance, the Far East is having to import far more cereals and cereal products than before the war. Some further increase in production of exportable products appears likely, but with the uncertain political future in many countries no material increase can be forseen. Meanwhile, because of the rapidly increasing population, imports of cereals are likely to increase if sufficient exchange can be obtained for their purchase.

In most other areas of the world, food consumption continues at a high level, but some of the countries which have used up their foreign exchange accumulated during the war find it difficult to keep up the high levels of consumption at current high prices.

World production of most major food products in 1948 maintained the upward trend of postwar years, and production of a few commodities exceeded the prewar average. The wheat crop was about 4 percent above average, thanks to favorable weather in most areas. Rye production still is somewhat below average, but the total supply of all bread grains is

above prewar average and appears about equal to effective demand. The rice crop is 3 percent above that of 1948 and only 2 percent below prewar, but inflation and political uncertainties are retarding its complete recovery in many Far Eastern countries. Raw sugar production of 37.7 million tons is about 3 million tons above prewar average, and some piling up of stocks may take place during 1949. Supplies of fats and oils also are increasing gradually, but the quantities available for international trade still are only about 60 percent of prewar. Supplies of edible vegetable oils have been increased by larger crops of cottonseed, soybeans, and peanuts. Some increase in animal fats is expected in 1949 as the expansion of dairy products and hog numbers gets under way as a result of increased feed supplies. Supplies of most fruits are somewhat below 1948, but with the exception of apples are at or above the prewar average and citrus fruit production may set a new record in 1948–49.

Meat production still is somewhat below prewar and is temporarily retarded by the need for building up livestock herds. Milk production in principal producing areas is also gradually returning to prewar levels, but has been retarded by the shortage of feed and the high cost of labor.

Europe [1]

The favorable weather of 1948 was primarily responsible for Europe's increased production of food and feed. Crops were larger in practically all countries except those in the Mediterranean area. Here, where the olive oil output is estimated at levels greatly below a year ago, only Italy appears to have had a sizable net increase in total food production. For Europe as a whole, the energy value of home-grown food supplies in 1948–49 is expected to be from 15 to 20 percent greater than in 1947–48 and within 3 percent of an *average* prewar year. However, a production index by value would still show a considerable drop compared with prewar because of the continued deficit in the output of livestock products. Too, since population has increased, per capita production of food energy even in this favorable year may not exceed 92 percent of the prewar average.

Included in the large increase in production were all grains—especially wheat—potatoes, and sugar beets. As a result of the larger feed supplies, both domestic and imported, livestock herds are being rebuilt, and some increase in the output of milk, eggs, meat, and animal fats is already expected for 1948–49. Total fat production in 1948–49, however, is unlikely to be much larger than in the preceding year, because of the smaller olive oil crop.

With imports maintained at the 1948 level, total food supplies for consumption will show a substantial increase over the 1947–48 figure, particularly in central and eastern European countries.

The improved food and feed situation is reflected in a number of developments.

In *France*, wheat and rye extraction rates were reduced, the bread and sugar rations were raised, and the feed supply increased.

In the *United Kingdom*, potatoes, bread, jam, and marmalade were derationed, and fat and sugar rations have recently been increased. Bacon rations, however, had to be temporarily reduced in November, but this reduction is to be made up by extra allowances of corned beef.

Rice and imported butter are the only food items still rationed in *Belgium*, and the larger feed supplies, both domestic and imported, will further help livestock recovery.

The *Netherlands* abandoned the rationing of bread, farinaceous foods, sugar, and milk. Extraction rates for flour, however, are being maintained at 80 percent, compared with 85 percent a year ago.

In *Switzerland* the last remaining products—breadstuffs and fats—were derationed several months ago. Extraction rates for wheat and rye flour were reduced to 78 percent, from 86 percent a year ago. Except for meat and sugar, per capita consumption is practically at the prewar level.

In *Denmark*, extraction rates for bread grains still average about 88 percent, as of a year ago, but the admixture of barley to wheat and rye flour was discontinued in September 1948. *Norway* hoped to abolish bread rationing, if at all possible, in January 1949. *Sweden* has derationed all breadstuffs, but the reduction in extraction rates has only been slight for 1948–49. Wheat and rye flour may still average at about 84 percent.

In *Germany*, average nonfarm consumption may be estimated at 2,450 calories per person per day compared with only a little more than 2,000 calories a year ago. This increase is due to larger bread, fat, and sugar rations. Potato consumption is also considerably above a year ago, with potatoes derationed in October after an excellent harvest. The situation is much the same, although on a somewhat lower level, in the French Zone of occupation. It is difficult to appraise the situation in the Soviet Zone although it seems that even there the level of nonfarm consumption may have reached the 2,300-calorie mark.

[1] Treated exclusive of the Soviet Union.

Latin America: Corn harvests were excellent in South America as well as in North America in 1948.

The food situation and prospects for *Austria* in 1948–49 are also considerably better than a year ago. The most important change in the rations was the increase to a 2,100-calorie normal consumer allowance in September 1948. Extraction rates have been reduced and are now at 85 percent for wheat and rye compared with 90 percent a year ago.

In *Czechoslovakia*, rations for bread, potatoes, fats, and meat were increased.

For foodstuffs as a whole, *Poland* this year is an exporter, whereas last year it was a net importer. Consumption this year in terms of calories should be up to the prewar level and still allow for substantial exports or for accumulation of stocks of grain and of sugar. Poland now also exports some bacon and ham, poultry, and eggs.

Italy's consumption rate of about 2,200 calories per person per day, compared with about 2,000 a year ago, is mainly the result of larger supplies of bread in the free market, although there was an increase in the weekly sugar ration early this year. Extraction rates for wheat have now been reduced to 80 percent from 83 percent in 1947–48, and it has been decided that the admixture of coarse grains for bread will be discontinued. General improvement in the food situation is also indicated by a measurable drop in retail prices of foodstuffs in the free market.

There will be little change in the general level of food availability in *Greece* during 1948–49, with per capita supplies of total energy approximately up to prewar.

Nevertheless, while total energy intake in most European countries during 1948–49 will come up to or near prewar levels, there remain serious deficiencies—in some areas—with respect to high-quality protein and fats. Germany and Austria have little more than half their prewar per capita supply of livestock products, and Germany has less than half of its prewar fat supply.

PRODUCTION OUTLOOK—Conditions for fall seeding have by and large been favorable. Labor and draft power supplies are generally adequate, with tractors more numerous than a year ago. In most countries, supplies of commercial fertilizer appear to be well above the prewar average and generally better than in 1947. Mild weather and adequate rainfall facilitated field operations and gave fall-sown grain a good start in most of western, northern, and central Europe and in Italy. Other parts of the continent are reported to have suffered from abnormally dry fall weather, but early winter rains relieved the drought at least in the Iberian Peninsula and Greece. However, unless weather conditions during the remainder of the present growing season are as unusually favorable as they were in 1948, yields are not likely to reach the 1948 level.

Soviet Union

The over-all crop situation in the Soviet Union, in 1948, continued its postwar recovery, though weather conditions were not as favorable as in 1947. Rationing of foodstuffs was formally abolished in December 1947, coincidental with a drastic devaluation of the Soviet currency. The food situation in Moscow and some other large cities improved more than seasonally during the second half of 1948, as compared with the severe stringency that had prevailed since the war. In some localities, however, the situation was much less satisfactory, but lack of reliable information for many important regions, especially in the drought-stricken Volga area, precludes a generalization on the over-all Soviet food situation.

The area sown to winter grains—rye, wheat, and a little barley—in the fall of 1948 was 6 million acres—7 percent larger than the winter-grain acreage sown in the fall of 1947. Weather conditions were, on the whole, favorable, except possibly in regions bordering on Rumania, where there was a drought. A much larger acreage was plowed in the fall of 1948 for spring seeding in 1949 than was the case during the preceding year.

The Far East

The vastly improved food situation in Western Europe does not find its counterpart in the Far East. Total food production here in 1948 was slightly above

that of the preceding year, but it falls short of the prewar per capita volume in the face of a growing population. The world's principal rice exporting countries, Burma, Siam, and French Indochina, have an estimated production of 11,500,000 short tons, about the same as in 1947 and 83 percent of the prewar average of 13,900,000 short tons.

Japan and Korea have good crops, but Japan faces a deficit of nearly 2.6 million short tons—nearly as large as in 1948—while Korea's will be considerably smaller than the 330,000 short tons of 1948. China has an over-all good crop, yet the food shortages in some deficit areas are very acute. Pakistan has shifted from a food exporter to a food importer, and India remains in need of approximately 3 million tons of imported food. Production in Malay, Ceylon, Indonesia, and the Philippines has improved somewhat, but indications are that the need for imported food will be as great as last year, and in the first three countries, possibly greater.

In Japan, output of the six principal crops is larger than in 1939–40, but the country must feed a population of 81 million instead of 65 or 67 million before the war. To some degree, an increase in population is true of virtually every country under consideration. In addition, agricultural production in a number of Asiatic countries is not synonymous with food availability where it is most needed. A glut of rice in the countryside surrounding Shanghai does not necessarily mean that the city will have rice. Political unrest, military activities, and economic dislocations make it extremely difficult—if not impossible—to procure the surplus food from rural areas in sufficient volume to take care of the deficit areas of the respective countries. The combination of these factors, plus the slow recovery of production in the principal surplus-producing areas, explain the all-important fact that while before the war the Far East and southeastern Asia were responsible for a net export of nearly 5 million tons of food annually, in 1948 this area imported nearly 9 million tons, of which only 2 million tons came from the surplus-producing areas of the Far East. Approximately the same situation will prevail in 1949.

British Dominions

The British Dominions of Canada, Australia, New Zealand, and the Union of South Africa are surplus producers of a wide variety of food products, most of which are sold to the United Kingdom under bilateral trade agreements. During 1948, weather was favorable for food production in all of the Dominions, resulting in above-average exportable supplies of most crops. Livestock production in most of these countries during 1948–49, however, is expected to show little or no increase.

Latin America

Prospects for domestic food supplies in 1948 are good throughout most of the countries of Latin America. Production of food crops for domestic use has not expanded in Brazil as in other countries, necessitating the continued prohibition of most food exports. Brazilian rice exports declined considerably in 1948 from the record shipment of 1947, but sugar exports are expected to reach an all-time high.

Argentina will probably have good harvests of fruits, edible oilseeds, and most domestic food crops, but grain prospects for 1948–49 are down from last year. In fact, it appears from the present outlook that there will be no exportable surplus of wheat from the current crop and that all 1949 wheat exports must come out of carryover. Corn available for export is expected to be about 3,600,000 short tons, compared with normal exports of about 8,500,000 short tons.

The 1948 harvests of corn, beans, rice, and sugar were excellent in all the northern countries of Latin America. The principal food exports from these countries—sugar, bananas, and cacao—will be larger than in 1948. The Caribbean region will produce in the neighborhood of 8,350,000 short tons of sugar in 1948–49, almost 60 percent above prewar average. An estimated 82,500,000 50-pound stems of bananas will be available for export this year and 350,000,000 to 400,000,000 pounds of cacao.

Far East: 1948 soybean harvests were so small in this area that only the record crop in the United States offset a world-wide shortage.

Canada's Agricultural Outlook

by **ROBERT L. GASTINEAU**

Increasing concern over international exchange difficulties and the future of foreign-market outlets for many Canadian agricultural products characterized the 1948 annual Dominion-Provincial Agricultural Conference, held at Ottawa, December 6–8, 1948. Despite this concern, however, the Conference saw a likelihood that prices received by Canadian farmers in 1949 will remain at the 1948 level or perhaps decline slightly toward the end of 1949. It also reported that, assuming average crops, cash farm income should remain close to the high levels of 1947 and 1948. The general tone of the outlook for 1949 was, perhaps, best expressed by a delegate who likened the situation to that of a patient in a dentist's office. When a man under the drill is asked by the dentist, "Does it hurt?" he never answers, "No." He always says, "Not yet!"

The Conference was attended by Dominion officials, Ministers of Agriculture and their Deputies from all nine provinces, and representatives of the Canadian Federation of Agriculture and of the Wheat Pools. Also present as observers were a representative of the prospective province of Newfoundland, officers of the British Food Mission, and Agricultural Attachés of the United Kingdom, Belgium, the Netherlands, and the United States. The Food and Agriculture Organization and the World Bank were also represented. Attending from the United States Department of Agriculture were Dr. Bushrod W. Allin of the Bureau of Agricultural Economics; Phillip F. Aylesworth, Office of the Secretary; George R. Grange, Production and Marketing Administration; and Robert L. Gastineau, Office of Foreign Agricultural Relations.

Excellent, comprehensive papers on the situation and outlook for individual groups of commodities were prepared in the Dominion Department of Agriculture and presented to the Conference by its representatives. These were used as a basis for discussion from the floor of specific commodity problems. In the manner of a working conference, most of the debate during the first 2 days was "off the record," and discussions at times were both lively and pointed.

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Nevertheless, the frank, open consideration of difficulties in the year ahead contributed a great deal to common knowledge of common problems. From this standpoint the Conference was a success.

Briefly summarized, the situation by commodities was presented as follows:

Wheat.—Spring wheat acreage will probably be increased in 1949. Among the factors named as favoring this increase were an assured market for a large part of the crops, fall drought in the prairie Provinces, and almost certain reduction in 1949 acreages of rye and flax.

Feed Grains.—Net supplies of feed grains per animal unit available for the 1948–49 feeding season are about 25 percent greater than in 1947–48. Shipments from western Canada to eastern Provinces may be reduced as a result of favorable 1948 production of coarse grains in the eastern Provinces, particularly in Ontario and Quebec. Eastern farmers are likely to maintain coarse-grain acreages at 1948 levels.

Livestock.—Profitable prices for livestock in 1949 should be provided by lower supplies of all meats, continued strong domestic demand, the United Kingdom bacon agreement, and the market for beef and cattle in the United States.

Dairy Products.—Domestic demand is likely to remain high during 1949. Total milk production may approximate the estimated 1948 output of 16.5 billion pounds. Production of butter, cheese, and ice cream will probably be maintained at 1948 levels during 1949. Increased output of concentrated milk products may absorb any decrease which may occur in sales of fluid milk.

Eggs and Poultry.—The present outlook for export markets does not justify any expansion in egg production. Some decline is indicated during the first half of 1949. An increased production of market poultry in 1949 may be encouraged by the expectation of sustained consumer demand and by prices which prevailed in 1948.

Fruits and Vegetables.—Good fruit crops are anticipated in 1949. Marketing difficulties may exist for such fruits as apples, plums, prunes, and raspberries. In the event of another above-average crop, the outlook for potatoes in 1949 is for depressed prices. Vegetable acreage expanded in 1948 to a level that is likely to be maintained rather than increased.

Oilseed Crops.—The difficult export situation and a large carry-over, particularly of flaxseed, suggest 1949 acreages of flaxseed and rapeseed at a level lower than in 1948. Prospective demand for soybeans and sunflower seed in 1949 warrants consideration of an increase in acreage.

Dried Beans and Peas.—Current marketing difficulties make any expansion in acreages of these crops seem inadvisable.

Seeds.—1948 production of the seeds of most clovers and grasses and varieties of wheat, oats, barley, and flaxseed eligible for registered and certified grades constitutes an all-time record. Timothy is the only grass seed in short supply. If production in 1949 continues at this level, some marketing difficulties may be anticipated.

Conference Highlights

The highlight of the Conference came at the concluding session with the announcement by the Rt. Hon. James G. Gardiner, Dominion Minister of Agriculture, of the British food contracts for 1949. These included bacon, cheese, and eggs.

Subject to ECA approval, the British in 1949 are to purchase 160 million pounds of bacon and 50 million pounds of cheese. Agreed prices were $36.00 per hundred pounds for top-quality bacon and 30 cents per pound, f. o. b. factory, for cheese. These prices are the same as those in the 1948 contract, when 195 million pounds of bacon and 50 million pounds of cheese were stipulated.

For eggs, the new agreement provides for 46 million dozen shell eggs or the equivalent in the form of dried whole or frozen whole eggs for the 11-month period, February 1 to December 31. Shipments in 1949 will be 19.5 million dozen storage eggs, 3,000 tons of dried eggs, and 4,000 tons of frozen eggs. While the new contract volume is below that of 1948, it is considered that with some opening of other export markets in 1949 the quantity should be reasonably adequate to absorb the probable production in that year.

It was announced at the same time that Britain would have no dollars available for fruit.

Also announced was the fact that no information was available on the price to be fixed for the 140 million bushels of wheat the United Kingdom was taking from the 1949 crop—the last of a 4-year agreement involving the sale of 600 million bushels of Canadian wheat to the United Kingdom. It was expected that this price was to be negotiated later in December at London.

Of interest in connection with the Conference was the meeting on Tuesday evening, December 7, of the Agricultural Institute of Canada. The principal speaker at this meeting was Dr. D. A. FitzGerald, Washington, D. C., Director of the Food and Agriculture Division, Economic Cooperation Administration and OFAR Director. Dr. FitzGerald reviewed the food position and progress of economic recovery in Western Europe during the past year. He also traced the development and work to date of ECA and the relation of the European Recovery Program to the agriculture of both Canada and the United States.

During the Conference it was generally recognized that the European Recovery Program was a dominant factor in the world economy today. But it was also recognized that it was a short-term program of rehabilitation and did not have the element of long-term stability. Dr. FitzGerald spoke to this point by calling for constructive and imaginative thinking in connection with North American trade policies, so that the end of ERP would find a sound basis for an expanded—not restricted—international trade.

Some Agricultural Aspects in Germany During the Period 1939–1945. British Intelligence Objectives Subcommittee Over-all Report No. 6, 12 pp. His Majesty's Stationery Office, 1948. 15 cents. This pamphlet contains digests of the following five reports on German agriculture made by British scientists who have visited Germany since the war: Fruit Plant Nurseries and Fruit Research Stations, by A. H. Hoare; Arabidopsis Thaliana, by Prof. F. G. Gregory and Dr. C. D. Carlington; Agricultural Research Institutes, by C. P. T. Gimingham and the Ministry's Library; Fertilizers and Soil Fertility, by Dr. E. M. Crowther; Agricultural Machinery, by J. V. Wilson, B. M. Hume, D. G. Mortimer, and D. I. McLaren.

Foreign Market Notes—Fats and Oils, Foreign Agriculture Circular FFO–19–48, 4 pp. Issued by the Office of Foreign Agricultural Relations, Washington, D. C., November 5, 1948. A preliminary report by Howard A. Akers, OFAR Marketing Specialist, on the fats and oil situation in South Africa. Production and outlook for peanuts, sunflower seed, flaxseed, castor beans, tung oil, cotton, butter, margarine, and whale oil are briefly discussed. (Mr. Akers has made a study in Europe and Africa of market outlets for and competition with United States fats and oils under the provisions of the Research and Marketing Act.)

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1950 Census of World Agriculture

A new picture of the world's agriculture is in the making—more complete, more accurate than any before. It will be of inestimable value to agriculture, business, and government.

by **JOSEPH A. BECKER**

More than 65 nations are making cooperative plans for taking a world census of agriculture in 1950. This will not be the first such effort to summarize the world's agricultural resources and production—but it will be the most accurate and the most complete.

Other agricultural surveys were taken in 1930 and 1940—under the leadership of the International Institute of Agriculture, now incorporated in the Food and Agriculture Organization of the United Nations—but those, though helpful, are now inadequate.

With the founding of the FAO, interest in a world census was renewed. Plans for the census have been under way since 1944. The outstanding feature of the 1950 census is the careful preparation that is being made. Census takers are being specially trained. Procedures are being set up. FAO is supplying a census consultative service to all participating nations. Every effort is being made to insure completeness and accuracy.

It is expected that this new census will provide the statistical information that agriculture, business, and government need for sound planning. It should be of special value to the agriculture of participating nations.

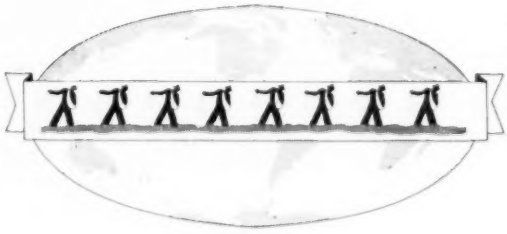
Even countries fortunate enough to have efficient crop reporting organizations and adequate information on trade in agricultural products need periodic agricultural censuses as benchmarks. Such benchmarks not only reveal the present state of agricultural development but also disclose the shifting patterns—geographical, economic, and social—that have worked to bring it about. If agriculture is to go forward on a sound basis, producers need agricultural statistical information not only for their own country but for other countries as well. The United States has a selfish interest in having well-conducted censuses not only at home but also abroad. Each other nation likewise has need for this type of international information.

The need for an agricultural census in 1950 is emphasized by the present chaotic condition of world agricultural production and trade. Even now, 3 years after the close of World War II, governments have found it necessary to continue regulating international movement of scarce commodities—cereals, rice, fats and oils, cocoa, and nitrogenous fertilizers. As the world moves from this period of scarcities, with restricted world trade, toward a period of possible surpluses there is a need for the development of programs that would tend to avoid periods of alternate feast and famine for the consumer and of ruinously low prices to producers in periods of oversupply. For such planning, much more should be known about the prospects for maintaining sound increases in production compatible with the growth of populations and the desired increases in the levels of consumption.

The FAO Conference in Washington in November 1948 recognized these needs and reaffirmed the keen interest of that organization and its member governments in a world-wide census of agriculture. The Conference agreed to continue its efforts in promoting the taking of the census, in assisting member governments to develop efficient techniques, and in obtaining results that will be comparable. In making his report to the Conference, the Director-General noted that satisfactory progress had been made during the past year. He was able to report that more than 65 countries have indicated to him that preparatory work is under way for the 1950 Census of Agriculture.

This major effort in international cooperation is an FAO project, but other organizations that have carried on effective work are the Inter-American Statistical Institute and the United States Interdepartmental Committee on Scientific and Cultural Cooperation.

The first essential steps to the successful administration of the census are being taken. A number of



countries have prepared new legislation authorizing the census, and others have strengthened legislative authority for the census. There has been material progress in the important geographical phases of a census—the acquisition of control maps and their duplication for the use of enumerators, supervisors, and central administrative officers.

The training of technical forces to conduct the census has made a pronounced advance over previous efforts. All agencies have combined in a far-reaching training program.

It is anticipated that these preliminary steps in promoting the census, making the administrative arrangements for it, and training the personnel will be amplified during 1949. Increased emphasis will be given to the technical phases of the actual enumeration and tabulation of the results. Problems of machine tabulation will be given increased attention, since therein lies the key to obtaining maximum results from the collected data. In order to obtain a greater degree of comparability between countries, there will be renewed discussions of classification of data by size groups and of the cross-classification of data, which are preliminary steps to the economic analysis and interpretation of the census. It is anticipated also that there will be considerable intergovernmental discussion under the sponsorship of FAO, dealing with the subject matter and the priorities on publication.

First World Agricultural Census

The current effort on the part of FAO is a continuation of international interest that was first generated in the International Institute of Agriculture, set up in 1905 with headquarters in Rome. The need for stimulating the countries of the world to take an inventory of their agricultural resources occupied the attention of officials of the Institute from its inception. After World War I, the Assemblies of the Institute discussed the problem at length, and the 1924 Assembly recommended that definite steps be taken to encourage all countries to begin preparing for a world census in 1930.

Mr. Leon M. Esterbrook, on leave from his position as Associate Chief of the Bureau of Agricultural Economics in the United States Department of Agriculture, was given the responsibility for organizing and conducting the project.

Everything considered, the immediate results of the project were material, and the ultimate results in setting up the principle of the need of the census and in stimulating the adherence of governments to their own recommendations made in international assemblies were far-reaching.

In the middle 1930's the Institute undertook to continue the work begun in the preceding decade. Under the leadership of Dr. Valentino Dore, who died in Washington during the 1948 FAO Conference, the Institute prepared a model questionnaire to serve as an approach to substantive comparability. Dr. Dore assembled the most recent census questionnaires from all countries of the world and set up a schedule that reflected the most commonly sought-for information. This basic questionnaire was submitted to the governments of the world with a request that a census be taken in 1940, that the questionnaire be considered in setting up the national program, and that the countries indicate the nature and progress of their plans.

Unfortunately, the outbreak of World War II in September 1939 led to the abandonment of proposed censuses in many countries. In some cases, it interrupted a census actually in progress. The preoccupation of the world with the war was such that in one or two instances the results of the enumeration were not tabulated completely or in any event were not published. Nevertheless, circumstances permitting, the work begun in the 1920's was continued, though at a slackened pace, in the 1930's, and the efforts of the Institute were not entirely in vain.

Recommendations for 1950 Census

The disturbance of World War II, with the resulting dislocation in the pattern of world production and trade, plus the world's slow recovery from the destruction brought about by the war stimulated many people everywhere to the need for an inventory of human and natural resources. This was one of the motivating factors that led the United States Government to invite all nations to the International Statistical Congress, held in Washington in September 1947. The world census was an important item on the agenda and further progress was made in building up interest.

As early as 1944, the Interim Commission of the FAO included in its preparatory work for the Inaugural Conference a discussion of the need for the 1950 World Census of Agriculture and recommended that the FAO, once it began to function, actively promote such a project. The Inaugural Conference, held at Quebec in October 1945, recommended that a study be made of the possibility of taking a world census by 1950 or as soon as practical thereafter.

The Second Session of the Conference, held in Copenhagen in September 1946, received the report of this study and recommended that the Conference endorse the proposal for a census, take steps to bring the matter to the attention of governments, prepare the minimum schedules so that they may be submitted to governments without delay, and make financial arrangements for its share of the proposed work.

Late in 1946, FAO called together in Washington representatives of the agricultural, statistical, and census organizations of a large number of countries and charged this group with the preparation of the census schedule. The group agreed upon a minimum schedule restricted to 62 items of universal importance. In addition, it prepared a more extensive list from which individual countries might wish to select items for enumeration. During 1947 and early 1948, these schedules were the subject of further discussion by regional groups. One such regional meeting was held in Rome to discuss the adaptability of the schedule to European conditions. Another was held in Cairo to examine its practicality for the Near East. A third meeting in London was directed to the problem of a census in the colonial and dependent areas of the world. The schedule of inquiry and the entire census project was made the subject of extensive study by the Special Committee of the 1950 Census of the Americas, a part of the Inter-American Statistical Institute.

The Third Session of the Conference of FAO, held in Geneva in August 1947, amplified the role of FAO as the responsible international agency in stimulating preparatory work for the 1950 census. The Conference recommended consultations of specialists, the establishment of training facilities for personnel to be engaged in planning and taking the census, and again recommended that the matter of the census be called to the attention of nonmember as well as member governments.

The census project was set up under the direction of Dr. Conrad Taeuber, and substantial progress was made in 1947–48 in carrying out initial steps.

Training Census Workers

An outstanding feature of the 1950 world agricultural census program has been the facilities provided for training census workers. In many respects, this is new and promises to produce results of incalculable value.

All the agencies concerned with the census have participated in this work at various levels. The international technical meetings, sponsored by FAO, have contributed to the training of all participants as have the regional meetings at which regional adaptations of the program were discussed. The Inter-American Statistical Institute early embarked on a program for facilitating the exchange of ideas and international visitation of census officials. During the past 3 years, members of its staff have worked with various countries to develop an outline of census procedures. The Institute's contribution in the field of map preparation has been especially well-planned and executed. In cooperation with the Pan American Institute of Geography and History, the United States Institute of Inter-American Affairs, and the Brazilian Institute of Geography and Statistics, it arranged to send Dr. Jorge Zarur, Assistant Director of the Brazilian Institute to each of the countries of the Western Hemisphere to work with census officials in organizing a map-making project.

The Interdepartmental Committee for Scientific and Cultural Cooperation is also participating in the training program. Since 1940, it has provided facilities for training, in the United States, students and officials from other Western Hemisphere countries. During 1947 and 1948, because of the census training program, emphasis was placed on instructing those interested in economics and statistics. The United States Bureaus of the Census, Labor Statistics, and Agricultural Economics and the University of Wisconsin and North Carolina State College are conducting special courses for census trainees. In addition, arrangements were made for trainees to attend regular courses in statistics and economics at other universities.

The Government of Mexico offered a special 4-month course, from September to December 1948, on the complete preparation of census plans. In this course, there were 58 students from 15 different Latin American countries. A school on agricultural statistics and census methodology was also held in Baghdad under the auspices of FAO in the spring of 1948 and was attended by about 40 statisticians fromEgypt, Iran, Lebanon, and Syria. Another training class for census officers was conducted in Nanking early in 1948 as a cooperative effort by the Chinese Government and FAO. It is anticipated that the enthusiasm aroused among census personnel by the success of these training courses will lead to a magnified program in 1949.

Consultative Service

In addition to assistance given Latin American countries by the Inter-American Statistical Institute, the Interdepartmental Committee, and the United

States Bureau of the Census, FAO has provided consultative service to participating nations. Dr. Dore visited several European countries and Señor Luis Rose Ugarte, many in Latin America.

Schedule

In September 1948, the Standing Advisory Committee on Statistics of the FAO considered a revised draft of the so-called minimum schedule for the 1950 census, which had been prepared by the Secretariat of the FAO as the result of the regional discussions that took place during the preceding year. This draft was adopted, with a number of changes, to form the present basic schedule for further presentation to the cooperating governments. It was agreed that in some underdeveloped countries, where a census has never been taken, there was little liklihood that a sufficient staff could be provided and trained to conduct a full census of agriculture in 1950. The advisory group recommended for such countries special surveys as a substitute for a census. It was suggested that these surveys might take the form of simple surveys of randomly selected areas that would show the general pattern of agriculture in the country and that might serve as the basis for estimating totals for the countries. Another suggested approach was the enumeration of the commercial agricultural output of the country, since this information might be obtained from the processors and handlers of agricultural commodities and might likewise serve as the basis for the estimation of totals for the country.

The final draft of the minimum schedule for the 1950 census is in many respects a remarkable document. The schedule makers sternly resisted their own leanings toward an extensive all-inclusive schedule and restricted it to 65 questions, with 10 subitems relating to livestock by sex. The information, which it is intended should be collected, is limited in nature and falls into six categories. The first category has to do with the agricultural holding, its size and form of tenure. The second is concerned with the utilization of land by the broad classification of arable land, orchards, meadows and pastures, wood or forest lands, and all other land. A third subject of inquiry is the agricultural population, which is restricted to a count of the members of the holders' households. The fourth category pertains to the area harvested in principal crops. The list of these crops on a world-wide basis is necessarily limited. It is anticipated that each country will include crops that are of major importance in its agricultural economy. The fifth subject—the minimum questions on farm power—ask only "Yes" or "No" with respect to the use in 1949 of animal power and mechanical power. The last category is the livestock inventory of work animals, cattle, sheep, goats, hogs, and poultry.

Even in its abbreviated form, this is a schedule that provides for a broad cross-section of agricultural resources and production sufficient in scope to give a fundamental picture of this basic industry.

In addition to this minimum schedule, there is the more extensive list of items, which provides for an expansion within each category and for several additional categories. Thus, additional information on tenure, land utilization, population, farm wages, and employment is suggested. Listed are a great many minor crops, which in the aggregate make a significant contribution to the world supplies of food and fibers and industrial raw materials. The present world-wide interest in increased efficiency in agricultural production is indicated by an extensive list of questions having to do with farm power and equipment, production and marketing of crops, the use of fertilizers, and the extent of irrigation and drainage of land. A number of questions on forest products of farm wood lots is also included.

The traditional questions on production of crops and of livestock products are omitted, even from the more extensive schedule for various reasons. First, it was recognized that production figures might be understated because of fear that they would have a bearing upon the amount of taxation. Secondly, there was the more practical consideration that for many items, particularly for livestock production, it is difficult to obtain accurate reports because of inadequate records and faulty memory. Thirdly, in the interest of economy, it is suggested that yields per unit of acre or per animal be estimated on a sample basis and applied to the enumerated total number of units.

The active program of stimulating a world-wide agricultural census is certain to produce results of tremendous importance. There is every evidence that censuses will be taken in countries that might not otherwise have engaged in such an effort at this time. There should be more comparability in the results. The program should lead to a more thorough enumeration and to a more efficient utilization of the facts collected. Finally, more far-reaching and useful information will be available on the present condition of agriculture throughout the world.

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Land Reform Progress in Japan*

by **W. I. LADEJINSKY**

Traveling through Japan in the spring of 1948 permitted me to observe the success that the Land Reform Program had made in changing the old agricultural order of too many landlords, too many tenants, and too many farmers on too little land. I could see the progress of the program especially in the Prefectures of Kagawa, Okayama, Fukuoka, Saga, and Kumamoto, some of the oldest parts of what is commonly referred to as Old Japan.

This region, differing from the more recently developed Hokkaido, with its ample elbow-room, and from Japan's main island, Honshu, is an excellent one in which to observe the effects of the reform, for here is exemplified to an extreme degree some of the basic difficulties of Japan's agricultural economy, which stem from an unhappy landlord-tenant relationship. Most tenant farmers in this area have less than an acre of land to till—landowners with holdings of 10 acres generally rent to 15 tenants. And the rentals are exorbitant—as high as 75 percent of the rice crop.

When the Land Reform Program was initiated late in 1946 by the Japanese Government in order to enable the majority of the tenants to become owner-farmers, the success of the program was not a foregone conclusion. The opposition of the landlords was taken for granted; the reluctance on the part of some of the tenants to avail themselves of the opportunity to buy land was anticipated, because rumors that taxes, crop failures, and the risk of ownership in general made it unwise for the tenants to buy land were rife.

Developments since then have disproved those fears. The active opposition of the landlords has been at a minimum, and in no case that I know of was the anxiety over the risk of ownership strong enough to overcome the cherished hope of being an owner-cultivator. "A farmer without land," a tenant remarked, "is like a man without life."

The local land commissions have no problem in finding buyers. They are confronted, however, with one real problem: How to allocate equitably the land subject to sale. Because of the complexity of some of the provisions of the program, the task is not an easy one. The commissions are aware of it, and solving it in a manner satisfactory to all the would-be buyers takes the patience of Job and the skill of Solomon. Nevertheless, the matter must be dealt with by the commissions in order to enable as many tenants as possible to enjoy some of the benefits of the reform.

This trip gave me the opportunity to get a glimpse of the work of the local land commissions. It is not easy, even for an interested observer, if he is only a morning or afternoon visitor, to find out how well a commission discharges its duties, unless confronted with a flagrant case of nonperformance. I have not encountered such.

In one of the villages, the commission had on file the applications from the tenants who wished to buy land and the terms of sale. A sample copy read as follows: "The undersigned wishes to purchase the land mentioned below in accordance with the provision of Article 8 of the Enforced Regulation of the Owner-Farmer Establishment, Special Measures Law, upon the following terms." There followed a statement as to the acreage, price, and manner of payment. The same commission has already prepared a tabular statement, showing how much land will be sold to each tenant and at what price. The content of each sheet, one per tenant, shows that a great deal of effort has gone into its preparation. The work of a commission to effect the purchase and sale of the land is a good index of its concern with the Land Reform Program. Judged on this basis, the majority of the commissions I dealt with may be rated as "good."

Every land commission is composed of landlords, tenants, and owner-farmers. In the course of the formulation of the Land Reform Law, the question of owner-farmer representation on the commissions came in for a great deal of discussion. It was felt then that their vote could seriously affect the course of the program—would they side with the tenants or with the landlords? It can be stated now that the owner-cultivator members generally vote with the tenants. Their position has also influenced that of the landlords, many of whom do not wish to register openly their opposition to the land reform. The unanimous vote of the commissions on rather crucial points, when normally landlords might be expected to register a dissenting vote, may be attributed, at least in some measure, to the stand taken by the owner-cultivators.

Much of the land-purchase program can be con-

* These are notes of a field trip that Mr. Ladejinsky made in March 1948. For his observations on the reactions of the landlords and tenants to the Land Reform Program when it was under consideration, see *Foreign Agriculture*, June 1947, pp. 83–88 and August-September 1947, pp. 121–128.

sidered accomplished, particularly when one adds the amount of land turned over to the Government in lieu of tax payments—many a landlord, being short of cash to pay taxes, is meeting his obligation in this way. The land acquired in this manner contributes a fair percentage of the amount originally estimated as subject to purchase under the Land Reform Program. Altogether, the Japanese Government has already acquired 86 percent of the original estimate of purchasable land in Fukuoka, 97 percent in Kagawa and Okayama, 99 percent in Kumamoto, and has exceeded the original estimate in Saga. The case of Saga is significant, for this is one of the Prefectures where the traditional strong position of the landlord was supposedly impregnable and undisputable.

I visited Kabe Village (Kagawa Prefecture) where all the land that was earmarked for sale has already been sold to tenants. One would have to see the good statistical work of the local commission to appreciate the earnestness and zeal with which it is carrying out the program. A glance at the bar graphs, brightly colored, reflects the amount of land purchased and sold by the village as a whole and by village subdivision (Buraku), while an excellent map records by actual measurement every plot of land sold to the tenants. I was rather impressed with the fact that the moving spirit of the reform in this village is a Mr. Oyama, landlord-member of the commission. He not only sold all of his land but also succeeded in inducing 25 other landlords to part with all of their allowable retention and 10 others to give up part of their retention. This enabled a number of tenants to acquire land that they could not have bought otherwise. In Kumamoto Prefecture, some of the villages are setting aside a certain percentage of the purchased land, usually 10 percent, for this purpose.

In Kagawa and Okayama, one of the elements that affect the sales of land and land consolidation, also a part of the Land Reform Program, is water utilization, so vital in raising a rice crop. Kagawa, for example, lacks good rivers from which the water can be diverted into rice fields and is dependent for its supply on some 50,000 water pools. Often, these pools or the water-utilization rights belong to the landlords, who, in turn, allocate the water to the cultivating farmers. The water pool is a property distinct from that of the land. Unless an adjustment is made, the landlord, especially if he cultivates land himself, is in a position to supply his own needs as he wishes and deny or restrict the use of water to his former tenants. The difficulties of land consolidation can be materially lessened if the water-utilization right is settled to the satisfaction of all concerned. Clearly, all other conditions being equal no consolidation can take place if the water supply is in question.

There are other reasons why even a cursory examination of the sale's sheets prepared by the local commissions reveals that a consolidation of holdings is not taking place. The number of strips after the completion of the land-purchase scheme will be approximately as large as ever (more than 90 million). In the course of my trip, it became fairly obvious that strips will not be consolidated into larger units until such time as most—if not all—of the land of a community is pooled. This was illustrated in a practical way when a local land commission took me to the fields to show why so little consolidation is taking place. It was clear that if every piece of land were perfectly interchangeable, it is the owner-cultivator's land—not subject to the land-reform provisions—that stands in the way of consolidation. A land commission will continue, therefore, to sell a tenant a great many scattered pieces of land instead of one compact holding. The owner-cultivator must consent or be compelled to throw his land into the pool before the real work of land adjustment can commence and the wasteful borderlines begin to disappear.

The land is being purchased at official prices set for the respective Prefectures. I could find no evidence that the landlords and tenants have been entering into private financial arrangements to bolster the price of the land. My impression is that the purchases are bona fide and that, if anything, the tendency on the part of the tenants has been to reduce the price as much as possible.

They achieve this by subtracting from the official price the "cultivation right" price paid by a tenant at one time or another. Such payments gave the tenants security of tenure, which in no way affected the rental arrangements. The payments were rather high in relation to the prewar price of land, and many a tenant feels, therefore, that the official prices under which the land is purchased must take account of that payment. The cultivation-right practice is widespread in some Prefectures and less in others. Where such rights do exist, the official price of land is reduced by 10 to 30 percent. In some villages, such as Kojo (Okayama Prefecture), it accounted for 40

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A village land commission with its office staff. The author is shown at the left and Captain Gilpin, American Military Government, on the right.

percent of the official price. That the tenants are entitled to these "refunds" is recognized by the landlords. Yet, they are unanimous in the demand that they receive the full price of the land as provided under the law. In view of the fact that the inflationary spiral has, to date, materially reduced the real value of the official prices fixed in early 1946, it would not be unreasonable for the Japanese Government to review the cultivation-right problem in the light of recent developments and pay the landlords the full price of the land.

The initial payments of the majority of the tenants who have already bought land amount to as much as 60 to 70 percent of the purchase price, which testifies to the cash prosperity of the rural community. Yet, the picture is far from uniform. Tenants in certain villages insisted that they cannot make large initial payments even though fully aware of the advantages of doing so. These villages are removed from large urban or industrial centers and are denied the opportunities of growing and selling vegetables or trading other products in the black market. Taxation, which they claim is levied on the theory that all farmers engage in black marketing, and the purchase of fertilizer and other items at black-market rates reduced their cash position still further.

As might have been expected, the landowners of Kagawa, Okayama, Fukuoka, Saga, and Kumamoto are not in favor of the Land Reform Program, chiefly because they believe that the price of land is not reasonable. I have encountered exceptions, however. On one occasion a landowner stated that, as an individual, he is at odds with the reform, but he supports it, mindful of the national interest. The virtue of resolving the personal interest in favor of the national interest is not given to many, and Mr. Yamai's voice (Rokka Village, Kumamoto) may be only a "voice crying in the wilderness." The more reason why his opinion should be recorded.

On another occasion, I listened to a landowner who put his finger on the need of a reform in these telling words: "It is high time for the landlords to step one down and for the tenants to step one up so that the two may meet for the first time." These are instances of accepting the spirit of the program, and admittedly, they are few in number.

It is significant to note, however, that while to the majority of the landowners the program is an unwelcome visitation, their opposition has not been actively pursued. Whatever the nature of the undercover agitation against the land-purchase scheme, it has had no adverse effect on its progress. In the midsummer of 1947, some landlords of Fukuoka, Kumamoto, and Saga initiated a number of court suits for the purpose of testing the constitutionality of the program. Since then, most of these cases faded out without ever coming to trial. Only one such case was still pending in Kagawa, while another nonconstitutional case (also in Kagawa) is not without passing interest since its main point is supposedly the violation of the Potsdam Declaration. The plaintiff, who had sold his land before entering the military service, wished to have the sale annulled because:

> The Japanese military forces, after being completely disarmed, should be permitted to return to their homes with the opportunity to lead peaceful and productive lives. (Potsdam Declaration, par. 9.)

Truly, one never knows.

Since the testing of the constitutionality of the law as a means of obstructing the program has been virtually abandoned, landlords in large numbers are attempting to gain possession of some of the tenanted land in order to raise food for their own consumption. The procedure is for a landlord to file an application with the Prefectural Governor in accordance with article 9, paragraph 3, of the Agricultural Land Adjustment Law, which reads:

> Where a party to the lease of agricultural lands intends to terminate or rescind the lease or to refuse its renewal an approval of the Prefectural Governor shall be obtained.

In Fukuoka Prefecture, 60 percent of such cases were decided in favor of the landowners; in Okayama, half were settled in favor of the landlords, one-fourth in favor of the tenants, and the remainder either withdrawn or pending. The settlement of many of them

was not strictly in accord with the provisions of the law. Yet I am not at all certain that it is either feasible or advisable to insist that the letter of the law must apply in every instance. I am mindful in this connection of a remark made by a Japanese on the meaning of *law:* it was to the effect that, to a Japanese of whatever walk of life, law is 75 percent sentiment and only 25 percent law in the Anglo-Saxon sense. Consciously or unconsciously, this idea seems to play quite a role in dealing with disputes on eviction, where the acreage at issue is small and where the attempt to retake and cultivate a piece of tenanted land is conditioned by a difficult food situation rather than by a consuming desire to obstruct the progress of the land reform. In the main, this is true of the Prefectures mentioned. In Okayama the amount of land per case is less than one-fourth of an acre. The net result of the legal and illegal evictions is the increase of the so-called small-consumption farms, which are relatively less productive and do not contribute to the national food supply. With the improvement in the food situation, these "fly-by-night" farmers are likely to disappear.

The American Military Government is also providing land for sale to tenants. Kurume airfield (Saga Prefecture) was formerly a center for training "kamikaze" suicide pilots, whose duty it was to ram their craft into the units of the allied fleet in a desperate effort to reduce its effectiveness. It was here that I saw an authentic example of "beating swords into plowshares." Little, if anything, remains of the airfield. Most of it has already been plowed, and in the course of this year one will look in vain for a shred of evidence that might testify to its wartime "non-agricultural" use. Kurume is but one instance of the efforts on the part of the American Occupation to place the former military lands into agricultural production and to sell the land to tenants.

I was equally impressed with the eagerness on the part of the American Military Government teams to effect the change as quickly as possible. Their main difficulty has been to get the Japanese Ministry of Finance, the repository of Government-owned property, to release the land. The problem of unraveling the maze of bureaucratic red tape to which all such transfers are subjected also enters into the picture. In accordance with the current procedure, the Prefectural land commission submits a "transfer plan" to the local finance office, which in turn is supposed to forward it, with recommendations, to the District Bureau of Finance for approval. All of this is more easily said than done. In Kumamoto, for example, out of 126 pieces of land scheduled to have been transferred by the end of December 1947, the District Bureau of the Ministry of Finance acted upon and approved the transfer of not more than 10. Military Government teams are aware of the slow progress; under their active prodding, the obstructions are being overcome.

In the main, notwithstanding the difficulties inherent in a rapid shift of the majority of tenants to an individual-owner base, I felt quite certain in early 1948 that the Land Reform Program was being successfully carried out. The economic gains that will accrue to the new owners are obvious. What is less obvious is the very important political gains from which the country as a whole is benefiting.

In this connection, a feature worth noting is the position of the Japanese Communist in the village and the failure of his Party's propaganda against the land-purchase program. The alacrity with which the tenants have already acquired and will continue to acquire land in the coming months is a good measure of that. The policy of the Japanese Communist now is to soft-pedal the issue for it is certainly politically unwise, and, in all probability, physically unsafe, for a Communist propagandist to stand up before a group of tenants urging them not to buy land. The Communists' main line of attack was not against land reform as such, but against this particular type of reform with its main emphasis on *private* ownership of the land rather than state, *individual* rather than collective. It was quite apparent to me that the agrarian reform now in progress has cut the political ground from under the feet of the Communists in the Japanese countryside, thereby strengthening the forces that make for a middle-of-the-road, stable, petit-bourgeois rural society.

Japanese farms are small and are worked intensively. Much of the work is done by hand.

An Experiment In Low-Cost Food Production

by **GRAHAM S. QUATE**

At its Tiquisate plantation on the Pacific slope of Guatemala, the United Fruit Company is doing some long-range planning in an effort to improve the welfare of company workers. For some time, the company has provided hospital and medical facilities, sold food to workers at prices well below market prices, and provided free schools and a free lunch program. Last year, the company again expanded the program—with an experiment in low-cost food production.

The experiment involves two specific problems. The first is the development of a practical means for using modern mechanized equipment, designed for use in temperate zones, in the production of food crops in hot lowland areas. The other is improving pastures and developing beef and dairy cattle adapted to tropical conditions.

As this program progresses, not only workers at Tiquisate but all of tropical America should benefit. If the program is successful, large-scale food production in lowland areas will be expanded, production costs will be reduced, and with the adapting of standard farm equipment to conditions in the area, a larger market for powered implements will be created.

Tiquisate plantation consists of 300,000 acres. It is located in one of the most important livestock sections of Guatemala and in an area where both climatic and soil conditions are favorable to food crops. Here there is at least a million acres of undeveloped land suitable for corn, beans, rice, and peanuts, provided means can be found for reducing farm-labor requirements. The land is also well drained, affording conditions favorable to the use of mechanized equipment.

The farm-mechanization experiment was begun in May 1948 on 350 acres of exceptionally fertile land. Such equipment as tractors, harvesters, discs, a trash rake, a rolling stalk cutter, and a corn sheller were provided for the project.

Operators did not have to be trained to handle this equipment since Tiquisate plantation is almost completely mechanized, and its highly efficient mechanical department was able to provide operators and maintenance service. This important factor assures a measure of success that would not be possible on other farms in this section.

Four crops are being grown experimentally—corn, beans, rice, and peanuts. It was apparent from the beginning of the project that the attempt to produce them with completely mechanized methods would be difficult. Some of the more obvious of these problems, as described by Enrique Garcia Salas (in charge of miscellaneous crops) after his first season's experience, were as follows:

Particular attention must be given to planting dates, so harvesting can be done in dry seasons.

Special methods for planting must be developed. For example, corn must be planted in deep furrows, with covering done by press wheels. A planter of this type would resemble a shallow lister.

The sweeps on weed cultivators must be removed or somewhat modified. Tractors equipped with cultivators must also have a screen tooth or rake that will dig out all weeds that are pressed into the ground by implement wheels, so they will dry and die.

Weeds constitute an especially difficult problem for mechanized agriculture in lowland areas. Here,

Weeds are a special problem for mechanized agriculture in tropical lowland areas.

the weeds are quite different from those found in the north. Growth continues throughout the entire year and at an extremely rapid rate during wet periods. Cultivators that succeed in killing temperate-zone weeds apparently do not have much effect on certain local varieties, particularly the native bindweed or morning glory.

All these problems can undoubtedly be solved, but it is obvious at this stage of the experiment that standard machinery must be modified substantially before it will be completely useful.

The problem of developing and maintaining pastures with high carrying capacities is related to the clearing of land and the control of weeds and so is somewhat similar to the experiment in mechanized agriculture. Experiments so far indicate that Napier grass, or Elephant grass, provides the most desirable pasture for dairy herds.

The livestock program will be concerned not only with feeding problems but also with developing types of cattle that are able to resist the effects of bright sunlight, humidity, high temperatures, and the attacks of tropical insects and parasites.

On the Tiquisate pastures are more than 8,000 fattening steers and about 2,000 breeding cattle, some of which are used for dairy purposes.

The steers were purchased from local stock producers, but in view of threatened cattle scarcities the breeding herd is to be increased to a point where all beef needed by the workers may be produced on the plantation.

The herd will eventually consist of dual-purpose types based on Brown Swiss and Zebu crosses, with some mixtures of selected native cattle. To carry out this plan the company has recently imported 49 purebred heifers and bulls from the United States.

Beef carcasses from steers purchased in Guatemala and fattened in plantation pastures now average 429 pounds each. It is anticipated that the breeding and pasture-improvement experiments now under way will result in a notable increase in these weights, particularly in the Brown Swiss-Brahma types being developed.

About 180 cows are being milked daily in the plantation dairy. Most of this herd consists of native cows, and production is rather low, averaging about 4.2 quarts of milk in two milkings for each cow.

A group of imported Brown Swiss cows produced an average of 9.5 quarts of milk a day during August, as compared with 3.4 quarts from native cows. However, a few selected native cows have averaged 6.8 quarts a day. These and others like them will be used as a basis for crosses with imported Brown Swiss bulls.

School children in Tiquisate are given bread and milk each morning.

Carefully controlled experiments are being made in the use of concentrated mixed feeds. Only locally produced items are used in these feeds, which include ground corn, bran from native wheat, cottonseed meal, and salt.

The Tiquisate dairy plant is carefully managed, with special attention given to sanitation. Milking machines are used, and all fresh milk is pasteurized, then cooled and placed in sterilized bottles for distribution.

Of the 750 quarts produced daily, 550 are sold to company workers at 10 cents a quart, and 170 quarts are used to provide free lunches in the school for workers' children in the town of Tiquisate.

Since 31 free schools with a total of 1,550 students are maintained on the Tiquisate plantation, it has not yet been possible to provide free lunches for all school children. This service is now offered only at the school in the headquarters town itself. Here 700 children are given a half pint of fresh milk and a roll of wheat bread each morning. The free lunch program is being expanded as rapidly as plantation facilities will permit.

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Latakia Tobacco

by **DEANE R. HINTON**

Latakia is a dark, richly aromatic, fire-cured tobacco grown in Syria. It was named for the city and the district where it is produced. The word "Latakia" has become familiar to many smokers in the United States. Small quantities are blended with our own tobacco in the manufacture of some cigarettes and, to some extent, of pipe tobacco mixtures.

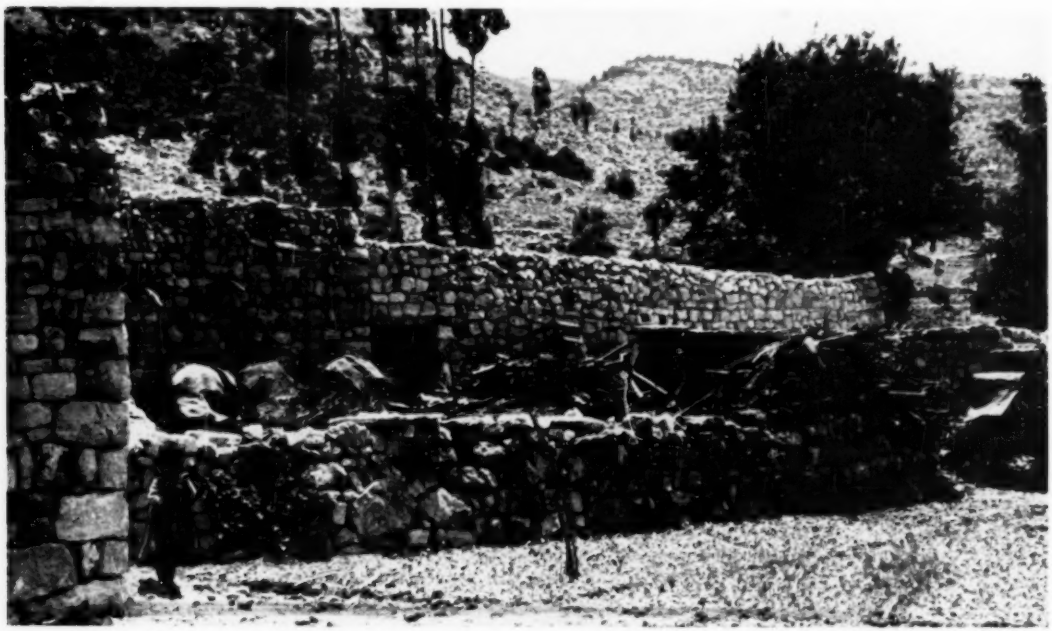
England was once the principal market for Latakia and still takes the top quality product, but by 1946 almost three-quarters of the crop went yearly to the United States. More than 2,000 metric tons [1] moved into world markets in 1946, bringing Syria more than $1,000,000 in vital foreign exchange.

The secret of good Latakia tobacco was discovered by chance, if one is to believe the following story, still told in Syria. Early in the nineteenth century, political disturbances interrupted the usual export of tobacco to Egypt. The Alaouite peasants of the Latakia hills, wishing to save the unmarketed part of their crop, tied the tobacco in long strings, which they hung under the roofs of their crude stone homes. The Alaouite peasants lived then, and to some extent live today, in an extremely simple fashion, and these houses, built without windows and flues, were heated by a fire burning in the middle of the room. The only opening to the room was a low door, built so as to preserve the heat. The tobacco hung through the winter in these smoke-filled homes. When spring and the new marketing season arrived the peasants found that their tobacco no longer was yellow but had turned black and taken on a peculiar odor.

In their desire to avoid a loss, the peasants were led to smuggle the dark tobacco in with their new crop when they sent it to market. Export agents baled the dark with the light and shipped it on to Egypt, fearing all the while that accusations of fraud would result. On the contrary, consumers found the dark tobacco enjoyable, and the word came back from Egypt "send us more of the dark; all you have."

Latakia's merchants, landowners, and peasants are convinced that smoking is the factor that determines the quality of their tobacco. As a result there is practically no interest in seed, plant, or soil selection

[1] A metric ton equals 1.1023 short tons.



The smoking process, which is carried on in such smokehouses as these, gives Latakia its distinctive flavor.

Nor is there conscious experimentation in methods of cultivation and fertilization.

Until shortly after World War I the smoking was done in the peasant's home. Older men remember that the smoke was so dense that they always had to lie on the floor. Under the stimulus of rapidly increasing demand, special smokehouses were built. They were constructed of stone in the same fashion as the peasants' homes, but the tobacco was handled differently. Instead of 1 or 2 rows of tobacco hung under the ceiling, smokehouses could be filled completely by racks that held 10 to 12 strands of tobacco one above the other. In addition, it was possible to speed the smoking process, and, instead of slow even smoking throughout the winter, fuel, time, and effort could be saved by building several small fires in a smokehouse and burning them only 30 or 40 days. Then, too, as larger amounts of tobacco were handled, it had to be sun cured, instead of dried during the fall while hanging in the houses. Perhaps the most adverse effect of these changes was the gradual exhaustion of the better wood for the smudge fires.

Branches of a variety of scrub oak, known in Arabic as Azur, are considered the best of all fuels for smoking Latakia tobacco. Through the years, Latakia's forests have steadily been depleted, and this oak is today found only in government-protected areas and in high, relatively inaccessible parts of the Alaouite Mountains. Second preference goes to pine branches, which are more plentiful, but these also are being used so rapidly that unless reforestation and protection practices are instituted large areas will be completely stripped in a few years, and the use of ordinary bush, even now resorted to in large measure, will become increasingly frequent. Experts have no difficulty in distinguishing oak-, pine-, or bush-smoked tobacco, and the price differential is considerable.

Since the expansion of Latakia acreage after World War I, growing, pricing, and marketing procedures have undergone considerable evolution. At one time, practically all Latakia tobacco was grown in the Alaouite Mountains. Today, with not enough good mountain land to handle the demand, approximately 70 percent is grown in the coastal areas of Latakia and transported to mountain smokehouses.

When the crop was grown entirely in the mountains, it was customary for tobacco exporters to go up to the villages early in the spring and negotiate with the Alaouite chiefs as to the price for their tribes' production. Payment was in gold per "piece," a piece being 62 strings or a normal donkey load. Bargaining frequently took days.

Latakia, yellow when picked, turns black when smoke cured.

In recent years there have been three principal ways in which Latakia reached the export market: (1) Large landowners grow their own tobacco on what are practically feudal estates and either smoke the tobacco themselves in mountain villages they own or contract with villagers to smoke it for them. (2) Tenant farmers or small landowners in the plain grow the tobacco and sell it green to wealthy merchants who then arrange for the smoking. This tobacco is grown under a system of advances, running normally from 40 percent to 80 percent of the crop value. (3) Villages grow, smoke, and market their own tobacco, much as of old, except that they go to the exporters rather than the exporters to them.

Mr. Hinton is Third Secretary and Vice Consul, American Legation, Damascus, Syria.

Reading about... Foreign Agriculture

Foreign Market Notes—Fats and Oils, Foreign Agriculture Circular FFO–16–48, 5 pp. Issued by the Office of Foreign Agricultural Relations, Washington, D. C., October 11, 1948. Preliminary report by Howard A. Akers on the oilseed trade and crushing situation in England, Belgium, the Netherlands, Denmark, and France. (Mr. Akers has made a study in Europe and Africa of foreign market outlets for and competition with United States fats and oils under the provisions of the Research and Marketing Act.)

Rural Mexico, by Nathan L. Whetten, with a foreword by Manuel Gamio (Instituto Indigenista Interamericano). 671 pp., illus., University of Chicago Press, Chicago, 1948. The foremost impression the reader gets from this book is that the author is intimately and extensively acquainted with Mexico and the literature about Mexico. He knows the country and the people well enough not only to give an objective picture of their characteristics and problems but also to suggest ways and means of developing programs to raise the standards and levels of living.

The book is broad enough in scope to be of interest to people in many different fields. Part I is devoted to an excellent discussion of geographical environment and the growth, distribution, and composition of the population. Dr. Whetten places a great deal of importance on the relation of geographical factors to the economic and cultural development of the people.

Part II deals with the relation of the people to the land. In this section the author discusses the various types of land tenure, devoting the first two chapters to the period prior to 1910 and most of the remainder to the numerous aspects of the various agrarian reforms resulting from the revolution.

Part III deals with the standards and levels of living of the rural people, with many comparisons of the rural and urban areas of Mexico. The main topics touched upon are housing, diet, clothing, health, mortality, and Indianism in relation to standards of living. This section is of special interest to sociologists, home economists—in general and nutritionists in particular—and anthropologists. Considerable emphasis is placed upon the cultural conditions of the people, in respect to their patterns of material consumption and health practices, and the consequent need of education to change such patterns and practices.

Part IV deals with social institutions and will be of particular interest to sociologists and anthropologists. It discusses and analyzes the family, the school, cultural missions, the Church, the Sinarquista movement, and the Government.

Part V, in the words of the author, "attempts to summarize a few of the major accomplishments of the Revolution and to restate some of the problems which remain to be solved before the avowed 'ideals of the Revolution' can be said to have been achieved."

The book will be helpful to anyone carrying on a program requiring a knowledge of the Mexican people and their problems, or those of any groups similar to the Mexicans. The scholarly presentation will appeal to all real students of Mexico and its people.

INTERNATIONAL *Agricultural News*

New Machine Cracks Babassú Nuts

The Babassú is a hard nut to crack. Therefore it must come as good news to Latin American producers of this important oil-yielding product that a new machine promises to do the job fast and well. The mechanized nutcracker, recently demonstrated in Brazil, will do the work of 50 men. Furthermore, it will turn out 80 percent whole kernels, as compared with only 20 percent whole kernels when the nuts are cracked by hand. It is very important that kernels be whole because producing areas are far from processing plants and damaged kernels deteriorate rapidly. The cost of cracking the husks by machine is $300 a ton.

The kernels of Babassú nuts contain 60 to 70 percent vegetable oil. The oil has been exported from Brazil for many years and is already known on world markets, despite the crude methods by which it has been produced. Available statistics indicate that from 1935–39 Brazil produced an average of 46,000 tons per year.

The Babassú palm, native to Brazil, grows over much of the country and is particularly abundant in that part of the interior where temperatures and rainfall are fairly uniform. The Babassú nut is one of the few cash crops on which rural dwellers in these areas can rely for the articles they must buy.

The Babassú resembles a small coconut. The oil is contained in kernels shaped somewhat like orange segments, which are embedded in the husk and difficult to extract. Under the customary hand method, the nuts are husked by holding them firmly on the blade of a machete or hatchet and beating them with heavy sticks until they crack. Since it is impossible to estimate just where the nuts are in the husk, many are broken or crushed.

Rinderpest Control Meetings

FAO plans to hold a conference in the Far East this year to discuss the control of rinderpest in that area.

Rinderpest is a highly infectious disease of cattle, and less often of sheep and goats. It is not found in the Western Hemisphere and is no longer prevalent in Europe, but in Africa, the Soviet Union, and the Far East it is not fully under control and causes tremendous

losses – at least 2 million cattle a year. It is particularly serious in China where cattle provide most of the farm power. About 50 years ago the disease destroyed 97 percent of the cattle in areas of southern Africa. Control measures are going forward, but the disease is still serious in certain areas of the continent.

Late in 1948, two international conferences were held in Africa to discuss the control of the disease. The first, the African Rinderpest Conference, was held in October under the joint sponsorship of Great Britain, France, and Belgium to launch a campaign for the total eradication of the disease from Africa and to establish a framework for control on the continent. This conference recommended the establishment of an African Rinderpest Organization to disseminate information and to supervise production and distribution of standardized biologicals at the lowest possible cost to participating governments. It also advocated additional research work, universal compulsory immunization of cattle, and international game control.

The second conference, also held in October, was under the auspices of the FAO. Scientific problems involved in rinderpest control were discussed, including techniques, cost of producing vaccines, their keeping qualities, reactions in vaccinated livestock, and other aspects of new control vaccines. The conference reported that goat virus, lapinized virus, and avianized virus vaccines had been used successfully but that further work needs to be done on all of them.

Former U. S. Citizen Promotes Growth of Corn in the Netherlands

The growing interest in corn production among Netherlands farmers is said to be attributable in large measure to Herman A. Bennink, a former United States citizen who is now owner of 't Amerikaansche Maishuis (the American Corn House) of Apeldoorn, the Netherlands. Mr. Bennink believes that increased production of corn in northern Europe, where it is relatively insignificant in comparison with the total grain crop, would greatly benefit that area. He views his own promotional activities as a personal crusade.

Typical of his efforts to encourage the growing of more corn in the Netherlands was his demonstration at 't Amerikaansche Maishuis in October 1948 of three American corn-harvesting machines. These machines represented the only such equipment in the Netherlands. All were lent for exhibition by the Netherlands representatives of the American manufacturers.

Approximately 200 obviously impressed farmers attended. For most of them it was a new experience to see such machines in action.

The increased interest among Netherlands farmers in corn as a grain is evidenced by the fact that from 1939 to 1947 there was a 24-percent increase in the total area planted to corn. Conversely, during these same years the area devoted to grains (principally wheat, rye, and oats) decreased.

Mr. Bennink began experimenting with American dent corn in the Netherlands 10 years ago. He regularly grows a small quantity of sweet corn, but he has never been able to bring about its general production in a sphere of the world where corn is almost universally considered undesirable for human use.

New Coconut Oil Process Discovered in Philippines

The discovery by two chemists in the Philippines of a method whereby coconut oil can be extracted direct from fresh coconut meat is expected to be of great value to the coconut industry. The two chemical engineers who invented the process, Pablo Robledano and Eduardo R. de Luzuriaga, claim that their process will produce coconut oil that is superior in quality, crystalline white, odorless, and free from rancidity. Previous to the discovery the practice has been first to produce copra from coconuts and then to extract the oil from the copra.

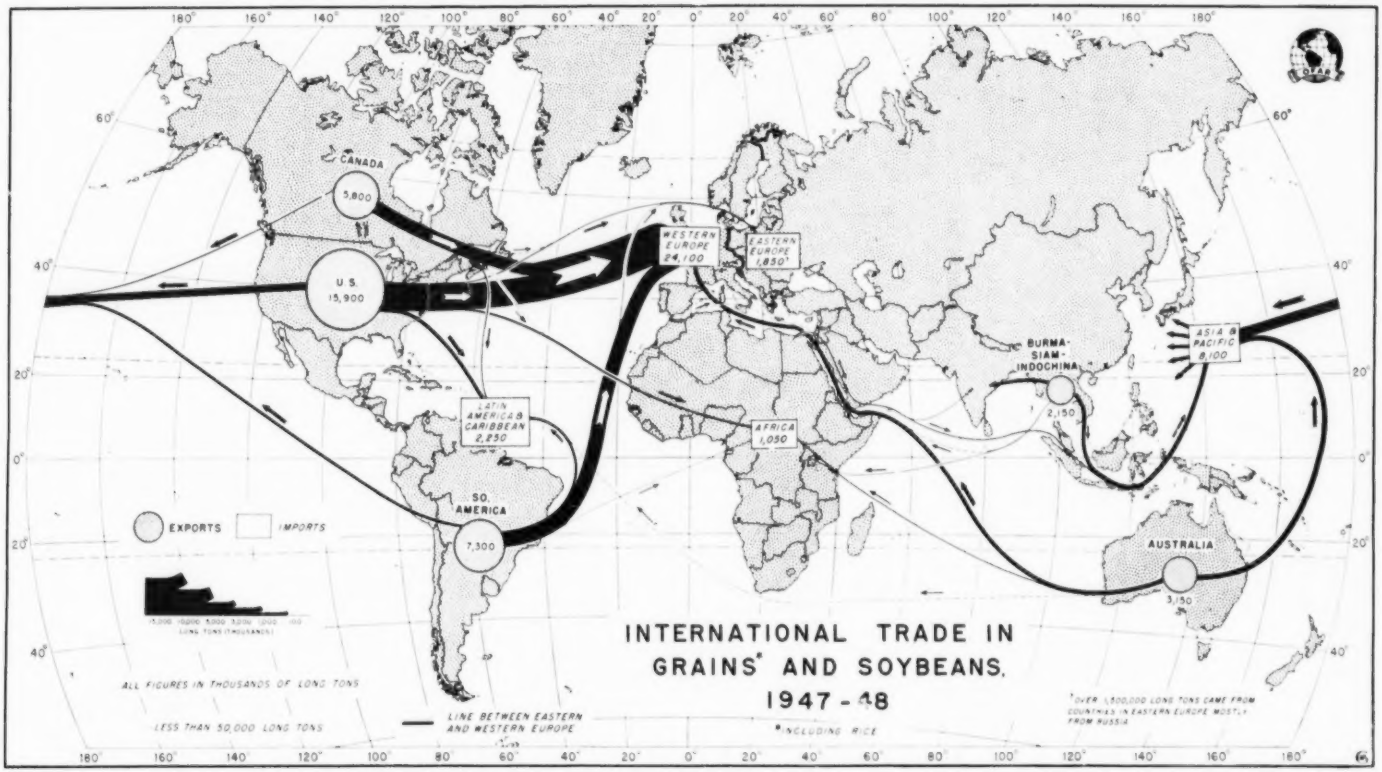
The R-L process is said to be simple: Direct extraction of milk from the fresh meat, then saline treatment, aging, chilling, then heating through a series of mechanical processes—and then oil—a series lasting about 24 hours.

The inventors say that the R-L process yields a higher percentage of oil from the coconut meat. In extracting oil from copra, some 10 to 18 percent of the oil content is lost; in the direct extraction process, only 4 percent is said to be lost.

Feed byproducts (such as meal and cake) obtained in copra processing are good only for animals. The inventors declare, however, that the byproducts obtained through their extraction method can be utilized as excellent human protein food.

It is said that the most ideal location for any plant using the R-L process would be near the seashore, where there would be an unlimited supply of salt water, most important in this process.

The commercial plans of Robledano and Luzuriaga have not been announced, but it is believed that the inventors will be disposed to grant production licenses to any group of coconut producers.



Grain and soybean shipments to western Europe in 1947–48 amounted to 24,100,000 long tons, an increase of 38 percent over the 1946–47 figure. Shipments to eastern Europe increased from 650,000 long tons to 1,850,000 long tons—an increase of nearly 185 percent during the same period. Nearly 85 percent came from eastern Europe, mainly Russia. The 1947–48 shipments of grain and soybeans from the United States were nearly three times the volume of prewar shipments for the average 1935–39 period.